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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,968	09/09/2003	Youngja Park	YOR920030241US1 (16751)	3125
23389 7590 05/06/2009 SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			EXAMINER SAINT CYR, LEONARD	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 05/06/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/658,968	Applicant(s) PARK, YOUNGJA	
	Examiner LEONARD SAINT CYR	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 15, 19 - 23, and 27 - 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 15, 19 - 23, and 27 - 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/24/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 – 15, 19 - 23, and 27 - 29 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that neither Goldsmith nor Kanno nor Wang et al., refining the sets of candidate prefixes and suffixes to identify actual prefixes and suffixes, including knowledge, previously discovered in the refining step, to further refine said sets of candidate prefixes and suffixes (Amendment, pages 8 – 11).

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1 – 15, 19 - 23, and 27 - 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldsmith (US Patent 6,405,161) in view of Kanno (US Patent 7,103,536) and further in view Taira (US PAP 2003/0105638).

Regarding claim 1, Goldsmith discloses a computer system for analyzing text in one or more electronic documents (see col. 3 lines 66-67 - col. 4, lines 1-4), comprising: one or more system interfaces (see fig. 2, element 202 and 208 and col. 6, lines 34 - 40); and an affix process that determines one or more affixes of one or more words in one or more of the documents and provides the affixes to the system interface (see fig. 1 step 104 and col. 5, lines 22-24).

Goldsmith does not specifically obtaining a collection of words, adding the words into a prefix Patricia Tree, using the prefix Patricia Tree to identify a set of candidate prefixes, reversing each of the words, adding the reversed words into a suffix Patricia Tree, using the suffix Patricia Tree to identify a set of candidate suffixes, refining the sets of candidate prefixes and suffixes to identify actual prefixes and suffixes, including using knowledge, previously discovered in said refining, to further refine said sets of candidate prefixes and suffixes.

Kanno discloses a data structure, **such as Patricia Tree**; an efficient retrieval method for complete matching and prefix matching is realized by using the data structure called TRIE; **reversing a word and adding it to a Patricia tree for (“postfix”) suffix matching** (see col. 1, lines 36 – 39, and 44 – 47; col.31, lines 52 - 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use prefix and suffix matching as taught by Kanno in Goldsmith, because that would help improve the retrieving system (col.3, lines 25 - 29).

However, Goldsmith in view of Kanno do not specifically teach refining the sets of candidate prefixes and suffixes to identify actual prefixes and suffixes, including using knowledge, previously discovered in said refining, to further refine said sets of candidate prefixes and suffixes.

Taira teaches that if the word is neither in the system's lexicons nor can be resolved by the special symbol processors at 730, at step 740 the word is subjected to a morphological analysis. Here, the system **attempts to recognize any prefixes,**

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suffixes, or Latin roots common in medicine. The system employs **a recursive algorithm, refining the characterization of words with each iteration. For example, the results of one iteration are sent to the next stage of processing**, including parsing and semantic interpretation to be described below, and based on the results of this stage may trigger a refinement of a word's classification in the system's lexicon. This refinement occurs only for words that have multiple senses and/or that have no entry in the lexicon (paragraphs 65, and 74).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use refinement process as taught by Taira in view of Goldsmith in view of Kanno, because that would help identify prefixes and suffixes of common words (paragraph 74).

Regarding claim 2, Goldsmith in view of Kanno and further in view of Taira further disclose where one or more of the affixes are nested affixes, each nested affix comprising one or more affixes (Goldsmith; see col. 6, lines 1-5 where "ingly" is an extracted nested affix).

Regarding claim 3, Goldsmith in view of Kanno and further in view of Taira further disclose where the affix process determines one or more suffixes of one or more of the words (Goldsmith see fig. 1, step 104 and col. 5, lines 22-24).

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Regarding claim 4, Goldsmith in view of Kanno and further in view of Taira further disclose where one or more of the suffixes are nested suffixes, each nested suffix comprising one or more suffixes (Goldsmith see col. 6, lines 1-5 where "ingly" is an extracted nested suffix).

Regarding claim 5, Goldsmith in view of Kanno and further in view of Taira further disclose where the affix process determines one or more infixes of one or more of the words (Kanno, Abstract).

Regarding claim 6, Goldsmith in view of Kanno and further in view of Taira further disclose where one or more of the infixes are nested infixes, each nested infix comprising one or more infixes (Goldsmith see col. 1, lines 19-22 and see col. 6, lines 1-5 where "ingly" is an extracted nested affix; see also Kanno, col.3, lines 26 – 29 "Infix matching").

Regarding claim 7, Goldsmith in view of Kanno and further in view of Taira further disclose wherein the affix process determines one or more prefixes of one or more of the words (Goldsmith; see fig. 1 step 108 and col. 6, lines 9-10).

Regarding claim 8, Goldsmith in view of Kanno and further in view of Taira further suggest wherein one or more of the prefixes are nested prefixes, each nested prefix comprising one or more prefix (Goldsmith; see col. 13, lines 6-7).

Regarding claim 9, Goldsmith in view of Kanno and further in view of Taira further disclose where the interface compiles a list of affixes that are in one or more of the documents (Goldsmith; see col. 5, lines 62- 66).

Regarding claim 10, Goldsmith in view of Kanno and further in view of Taira further disclose where the affixes are not listed in a dictionary that is accessible to the system (Goldsmith; see col. 5, lines 37-38, where the affix is determined by determining the optimal division, not by referring to a dictionary)

Regarding claim 11, Goldsmith in view of Kanno and further in view of Taira further disclose where the system interface is any one or more of the following: a graphical user interface, a print out, an interface to a text analysis system (Goldsmith; see fig. 2, lines elements 202 and 208 and see col. 6, lines 31-40).

Regarding claim 13, and 21 Goldsmith discloses a method for analyzing text in one or more electronic documents (see col. 3 lines 66-67 - col. 4, lines 1-4), comprising the steps: using a computer system to perform an affix process that determines one or more affixes of one or more words in one or more of the electronic documents (see fig. 2 and col. 6, lines 31-33, where the method of fig. 1, describes the affix determination process); and providing the determined one or more of the affixes to an interface of the computer system for display to a user (see fig. 2, element 208 and col. 6, lines 39-40).

Goldsmith does not specifically obtaining a collection of words, adding the words into a prefix Patricia Tree, using the prefix Patricia Tree to identify a set of candidate prefixes, reversing each of the words, adding the reversed words into a suffix Patricia Tree, using the suffix Patricia Tree to identify a set of candidate suffixes, refining the sets of candidate prefixes and suffixes to identify actual prefixes and suffixes, including using knowledge, previously discovered in said refining, to further refine said sets of candidate prefixes and suffixes.

Kanno discloses a data structure, such as Patricia Tree; an efficient retrieval method for complete matching and prefix matching is realized by using the data structure called TRIE; **reversing a word and adding it to a Patricia tree for (“postfix”) suffix matching** (see col. 1, lines 36 – 39, and 44 – 47; col.31, lines 52 - 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use prefix and suffix matching as taught by Kanno in Goldsmith, because that would help improve the retrieving system (col.3, lines 25 - 29).

However, Goldsmith in view of Kanno do not specifically teach refining the sets of candidate prefixes and suffixes to identify actual prefixes and suffixes, including using knowledge, previously discovered in said refining, to further refine said sets of candidate prefixes and suffixes.

Taira teaches that if the word is neither in the system's lexicons nor can be resolved by the special symbol processors at 730, at step 740 the word is subjected to a morphological analysis. Here, the system **attempts to recognize any prefixes,**

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suffixes, or Latin roots common in medicine. The system employs **a recursive algorithm, refining the characterization of words with each iteration. For example, the results of one iteration are sent to the next stage of processing**, including parsing and semantic interpretation to be described below, and based on the results of this stage may trigger a refinement of a word's classification in the system's lexicon. This refinement occurs only for words that have multiple senses and/or that have no entry in the lexicon (paragraphs 65, and 74).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use refinement process as taught by Taira in view of Goldsmith in view of Kanno, because that would help identify prefixes and suffixes of common words (paragraph 74).

Regarding claims 14, and 22 Goldsmith in view of Kanno and further in view of Taira further disclose wherein at least one of the affixes is a nested affix including a plurality of affixes (Goldsmith; see col. 6, lines 1-5 where "ingly" is an extracted nested affix).

Regarding claims 15, and 23 Goldsmith in view of Kanno and further in view of Taira further disclose, the step of, said interface compiling a list of the determined one or more affixes (Goldsmith; see col. 5, lines 62-66).

Regarding claims 19, and 27 Goldsmith in view of Kanno and further in view of Taira further disclose that the using step includes the further step of counting stems, which meet defined criteria, for the affixes for the words in said set of words (Goldsmith; see col. 6, lines 66 -col. 7, line 7).

Regarding claims 20, and 28 the limitations of claims 18 and 27 have been met as discussed above. Goldsmith further discloses wherein the using step includes the further step of disambiguating at least some of the potential affixes to identify nested affixes (Goldsmith; see col. 6, lines 1-5).

As per claim 29, Goldsmith in view of Kanno and further in view of Taira do not specifically teach disambiguating some of the affixes; generating new affixes from the disambiguated affixes. However, a morphology for a language has been developed by a trained linguist working manually to identify the appropriate stems and affixes and other structural features of a language (col.1, lines 18 – 22). One having ordinary skill in the art at the time the invention was made would have found it obvious to disambiguate affixes in Goldsmith, because that would help collect and organize stems and associated affixes (col. 1, lines 15, and 16).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD SAINT CYR whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS

04/28/09

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626